

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A scrubbing product comprising:

a liquid absorbent structure comprising a plurality of fibrous cellulosic webs, the webs including at least eight paper webs containing at least 5% by weight high yield fibers, the absorbent structure having a thickness;

a plurality of apertures extending at least partially through the thickness of the absorbent structure, the apertures having a diameter of less than about 10 mm;

wherein each fibrous cellulosic web is adjacent to at least one other fibrous cellulosic web; and

wherein the scrubbing product includes at least one layer comprising a thermally bondable material, the thermally bondable material having been heated during formation of the apertures causing the thermally bondable material to bond to adjacent layers; and

wherein the plurality of apertures are formed and arranged such that the structure of the apertures contributes to the structural integrity of the liquid absorbent structure in the direction of the absorbent structure's thickness by fusing adjacent cellulosic webs and the at least one layer comprising a thermally bondable material along the thickness of the absorbent structure to form cavities into the absorbent structure that are fused along their periphery.
2. (Original) A scrubbing product as defined in claim 1, wherein the apertures have a diameter of from about 0.5 mm to about 5 mm.

3. (Original) A scrubbing product as defined in claim 1, wherein the apertures are present in the absorbent structure in an amount from about 1 aperture per square inch to about 30 apertures per square inch.

4. (Original) A scrubbing product as defined in claim 1, wherein the apertures extend through at least 10% of the thickness of the absorbent structure.

5. (Original) A scrubbing product as defined in claim 1, wherein the apertures extend through at least 10% of the thickness of the absorbent structure but less than about 90% of the thickness.

6. (Original) A scrubbing product as defined in claim 1, wherein the apertures extend through at least 10% of the thickness of the absorbent structure but less than about 50% of the thickness.

7. (Original) A scrubbing product as defined in claim 1, wherein the apertures have a depth that is not uniform in relation to one another.

8. (Cancelled)

9. (Original) A scrubbing product as defined in claim 1, wherein the apertures are formed into one side of the absorbent structure.

10. (Original) A scrubbing product as defined in claim 1, wherein the apertures are formed into opposite sides of the absorbent structure.

11. (Original) A scrubbing product as defined in claim 1, wherein the absorbent structure further comprises a cover wrapped around the plurality of fibrous webs.

12. (Original) A scrubbing product as defined in claim 1, wherein the apertures form passages in the absorbent structure, the passages containing a chemical additive.

13. (Original) A scrubbing product as defined in claim 12, wherein the chemical additive comprises a soap or a detergent.

14. (Original) A scrubbing product as defined in claim 1, wherein the apertures have different diameters.

15. (Cancelled)

16. (Original) A scrubbing product as defined in claim 1, wherein the fibrous cellulosic webs comprise uncreped, through-air dried webs.

17. (Original) A scrubbing product as defined in claim 1, wherein the fibrous cellulosic webs comprise airlaid webs, coform webs, hydroknitted webs, bonded carded webs, or mixtures thereof.

18. (Original) A scrubbing product as defined in claim 1, further comprising an abrasive layer secured to one side of the absorbent structure, the abrasive layer comprising polymeric fibers in a non-uniform distribution.

19. (Original) A scrubbing product as defined in claim 18, wherein the polymeric fibers are made from a material selected from the group consisting of polypropylene, polyethylene, polyester, polystyrene, polyamide, polyvinylidene, polyvinyl chloride, polyurethane, polyurea, and copolymers thereof.

20. (Original) A scrubbing product as defined in claim 18, wherein the abrasive layer comprises a meltspun web.

21. (Original) A scrubbing product as defined in claim 18, wherein the abrasive layer comprises a meltblown web.

22. (Cancelled)

23. (Previously Presented) A scrubbing product as defined in claim 1, wherein the liquid absorbent structure contains at least 12 fibrous webs.

24. (Cancelled)

25. (Original) A scrubbing product as defined in claim 18, wherein the polymeric fibers have a diameter of at least 40 microns.

26. (Original) A scrubbing product as defined in claim 1, wherein one set of apertures are formed into one side of the absorbent structure while a second set of apertures are formed into an opposite side of the absorbent structure, the apertures of the first set being positioned in the Z-direction offset from the apertures of the second set.

27. (Original) A scrubbing product as defined in claim 26, wherein the first set of apertures and the second set of apertures only extend partially through the thickness of the absorbent structure.

28. (Original) A scrubbing product as defined in claim 18, wherein the apertures also extend through the abrasive layer.

29. (Previously Presented) A scrubbing product as defined in claim 1, wherein the fibrous cellulosic webs contained in the absorbent structure are also adhered together by an adhesive material.

30. (Original) A scrubbing product as defined in claim 1, wherein the absorbent structure includes or is adjacent to at least two layers of a thermally bondable material, the two layers being ultrasonically bonded together within the apertures.

31. (Original) A scrubbing product as defined in claim 1, wherein at least certain of the apertures receive a thread for forming stitches through the absorbent structure.

32. (Original) A scrubbing product as defined in claim 31, wherein the absorbent structure includes a perimeter and wherein the stitches are located only along the perimeter of the absorbent structure.

33. (Currently Amended) A scrubbing product comprising:
a liquid absorbent structure comprising a plurality of fibrous cellulosic webs comprising high yield fibers, the liquid absorbent structure including at least 8 layers of the webs, the absorbent structure having a thickness;
a plurality of apertures extending at least partially through the thickness of the absorbent structure, the apertures having a diameter of from about 0.5 mm to about 10 mm, the apertures being present at a density of from about 1 aperture per square inch to about 30 apertures per square inch;

wherein each of the plurality of fibrous cellulosic webs in the liquid absorbent structure is adjacent to at least one other fibrous cellulosic web; and
wherein the scrubbing product includes at least one layer comprising a thermally bondable material, the thermally bondable material having been heated during formation of the apertures causing the thermally bondable material to bond to adjacent layers; and

wherein the plurality of apertures are formed and arranged such that the structure of the apertures contributes to the structural integrity of the liquid absorbent structure in the direction of the absorbent structure's thickness by fusing adjacent

cellulosic webs and the at least one layer comprising a thermally bondable material
along the thickness of the absorbent structure to form cavities into the absorbent
structure that are fused along their periphery.

34. (Original) A scrubbing product as defined in claim 33, wherein the apertures extend through at least 50% of the thickness of the absorbent structure.

35. (Original) A scrubbing product as defined in claim 33, wherein the apertures extend through at least 90% of the thickness of the absorbent structure.

36. (Original) A scrubbing product as defined in claim 33, wherein the apertures are formed into one side of the absorbent structure.

37. (Original) A scrubbing product as defined in claim 33, wherein the apertures are formed into opposite sides of the absorbent structure.

38. (Original) A scrubbing product as defined in claim 33, wherein the absorbent structure further comprises a cover wrapped around the plurality of fibrous webs.

39. (Original) A scrubbing product as defined in claim 33, wherein the apertures form passages in the absorbent structure, the passages containing a chemical additive.

40. (Original) A scrubbing product as defined in claim 39, wherein the chemical additive comprises a soap, a detergent, a buffering agent, an antimicrobial agent, a skin wellness agent, a lotion, a medication, a polishing agent, or a mixture thereof.

41. (Original) A scrubbing product as defined in claim 33, wherein the fibrous cellulosic webs comprise uncreped, through-air dried webs.

42. (Original) A scrubbing product as defined in claim 33, further comprising an abrasive layer secured to one side of the absorbent structure, the abrasive layer comprising polymeric fibers in a non-uniform distribution.

43. (Original) A scrubbing product as defined in claim 42, wherein the abrasive layer comprises a meltspun web.

44. (Original) A scrubbing product as defined in claim 42, wherein the abrasive layer comprises a meltblown web.

45. (Original) A scrubbing product as defined in claim 33, wherein the paper webs contain at least 5% by weight high yield fibers.

46. (Original) A scrubbing product as defined in claim 33, wherein one set of apertures are formed into one side of the absorbent structure while a second set of apertures are formed into an opposite side of the absorbent structure, the apertures of the first set being positioned in the Z-direction offset from the apertures of the second set.

47. (Original) A scrubbing product as defined in claim 46, wherein the first set of apertures and the second set of apertures only extend partially through the thickness of the absorbent structure.

48. (Previously Presented) A scrubbing product as defined in claim 33, wherein the fibrous cellulosic webs contained in the absorbent structure are also adhered together by an adhesive material.

49. (Original) A scrubbing product as defined in claim 33, wherein the absorbent structure includes or is adjacent to at least two layers of a thermally bondable

material, the two layers being ultrasonically or thermally bonded together within the apertures.

50. (Original) A scrubbing product as defined in claim 33, further comprising a plurality of stitches extending through the absorbent structure.

51. (Original) A scrubbing product as defined in claim 33, wherein the fibrous cellulosic webs comprise bonded carded webs.

52. (Currently Amended) A scrubbing product comprising:
a liquid absorbent structure comprising a plurality of fibrous cellulosic webs comprising high yield fibers, the liquid absorbent structure including at least 8 layers of the webs, the absorbent structure having a thickness;
a plurality of apertures extending at least partially through the thickness of the absorbent structure, the apertures having a diameter of from about 0.5 mm to about 10 mm, the apertures being present at a density of from about 1 aperture per square inch to about 30 apertures per square inch;
an abrasive layer secured to at least one side of the absorbent structure, the abrasive layer comprising polymeric fibers in a non-uniform distribution, the abrasive layer comprising a meltspun web;
wherein each of the plurality of fibrous cellulosic webs in the liquid absorbent structure is adjacent to at least one other fibrous cellulosic web; and
wherein the scrubbing product includes at least one layer comprising a thermally bondable material, the thermally bondable material having been heated during formation of the apertures causing the thermally bondable material to bond to adjacent layers; and

wherein the plurality of apertures are formed and arranged such that the structure of the apertures contributes to the structural integrity of the liquid absorbent structure in the direction of the absorbent structure's thickness by fusing adjacent cellulosic webs and the at least one layer comprising a thermally bondable material along the thickness of the absorbent structure to form cavities into the absorbent structure that are fused along their periphery.

53. (Original) A scrubbing product as defined in claim 52, wherein the fibrous cellulosic webs comprise uncreped, through-air dried webs.

54. (Cancelled)

55. (Original) A scrubbing product as defined in claim 52, wherein the abrasive layer comprises a meltblown web.

56. (Original) A scrubbing product as defined in claim 52, wherein the liquid absorbent structure contains at least 12 layers.

57. (Original) A scrubbing product as defined in claim 52, wherein the liquid absorbent structure contains at least 18 layers.

58. (Original) A scrubbing product as defined in claim 52, wherein one set of apertures are formed into one side of the absorbent structure while a second set of apertures are formed into an opposite side of the absorbent structure, the apertures of the first set being positioned in the Z-direction offset from the apertures of the second set.

59. (Original) A scrubbing product as defined in claim 58, wherein the first set of apertures and the second set of apertures only extend partially through the thickness of the absorbent structure.

60. (Original) A scrubbing product as defined in claim 52, wherein the apertures also extend through the abrasive layer.

61. (Previously Presented) A scrubbing product as defined in claim 52, wherein the fibrous cellulosic webs contained in the absorbent structure are also adhered together by an adhesive material.

62. (Original) A scrubbing product as defined in claim 52, wherein the absorbent structure includes or is adjacent to at least two layers of a thermally bondable material, the two layers being ultrasonically bonded together within the apertures.

63. (Original) A scrubbing product as defined in claim 62, wherein at least one layer of the thermally bondable material comprises the abrasive layer.

64. (Original) A scrubbing product as defined in claim 63, wherein the second layer of the thermally bondable material comprises a fibrous layer secured to the absorbent structure on a side of the absorbent structure opposite a side of the absorbent structure adjacent to the abrasive layer.

65. (Previously Presented) A scrubbing product as defined in claim 1, wherein the high yield fibers comprise chemithermomechanical pulp fibers.

66. (Previously Presented) A scrubbing product as defined in claim 33, wherein the high yield fibers comprise chemithermomechanical pulp fibers.

67. (Previously Presented) A scrubbing product as defined in claim 52, wherein the high yield fibers comprise chemithermomechanical pulp fibers.